

Date: Wednesday, 4/4/2007 8:58:27 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 31594  
 Estimate Number : 12783  
 P.O. Number : *N/A*  
 This Issue : 4/4/2007 S.O. No. : *N/A*  
 Prsht Rev. : NC  
 First Issue : *N/A* Type : LANDING GEAR  
 Previous Run : 31435

Drawing Name : X-TUBE 412

Part Number : D412664145  
 Drawing Number : D412-664-245 U/R  
 Project Number : N/A  
 Drawing Revision : U/R  
 Material : *N/A*  
 Due Date : 4/30/2007

Qty: 1 Um: Each

Written By : *[Signature]*  
 Checked & Approved By : *[Signature]*  
 Comment : Est Rev: A New Issue 07-02-14 JLM

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: Photocopy bluefile & type labels per PPPD412-664-105 CHG 001

*N/A* *Revised with B31182*

2.0 D6019128 Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6019-128 Crosstube *329369*

Check OD = 2.7500"; ID =

*S.F 01/04/12*

3.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

Turn as per Dwg D412-664-145

*S.F 01/04/12*

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

*S.F 01/04/12*

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

*mk 02/04/19*

6.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Polish entire outside surface of crosstube

*JP 7-4-20*



**DART**

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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D412-664-145	REV. C SHEET 1 OF 3
DATE 07.03.29		TITLE CROSSTUBE ASS'Y (412 LOW-N FWD) NTS	
A	06.12.21	NEW ISSUE	
B	07.03.01	CHG RUBBER CUSHION	
C	07.03.29	CHG CLAMP & RUBBER CUSHION LGTH.	

**RELEASED**07.04.24 *[Signature]***PARTS LIST:**

Qty	Part Number	Description
X	D412-664-145	CROSSTUBE ASSEMBLY (412 LOW-NARROW FWD)
1	D6019-128	CROSSTUBE
1	D2856-250-842	ABRASION STRIP
2	D2893-1	SUPPORT
1	D3189-3	CHAFING SHIELD
4	D3595-063-450	RUBBER CUSHION
2	MS21920-24	CLAMP
4	MS21920-25	CLAMP (OR MS21920-26)
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

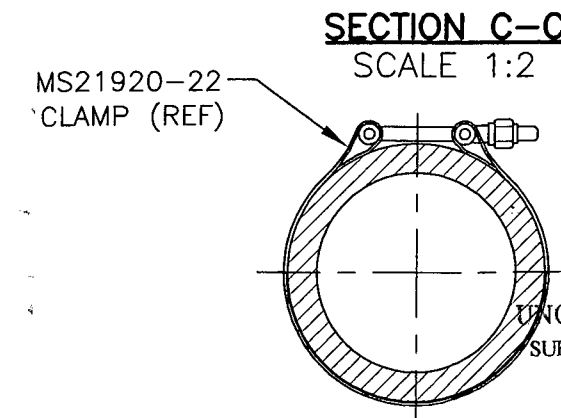
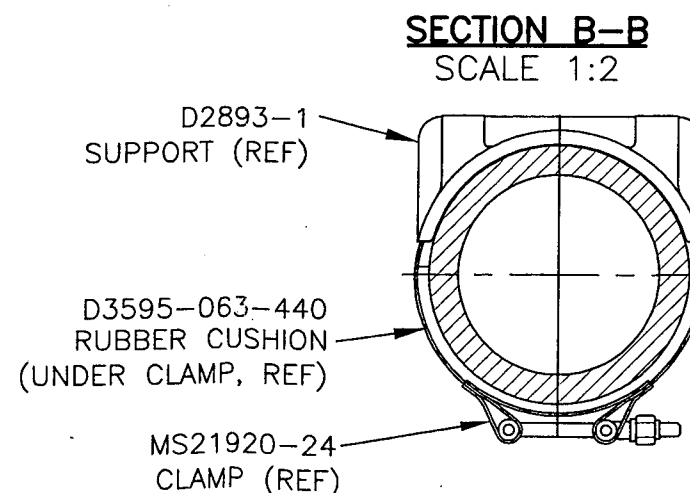
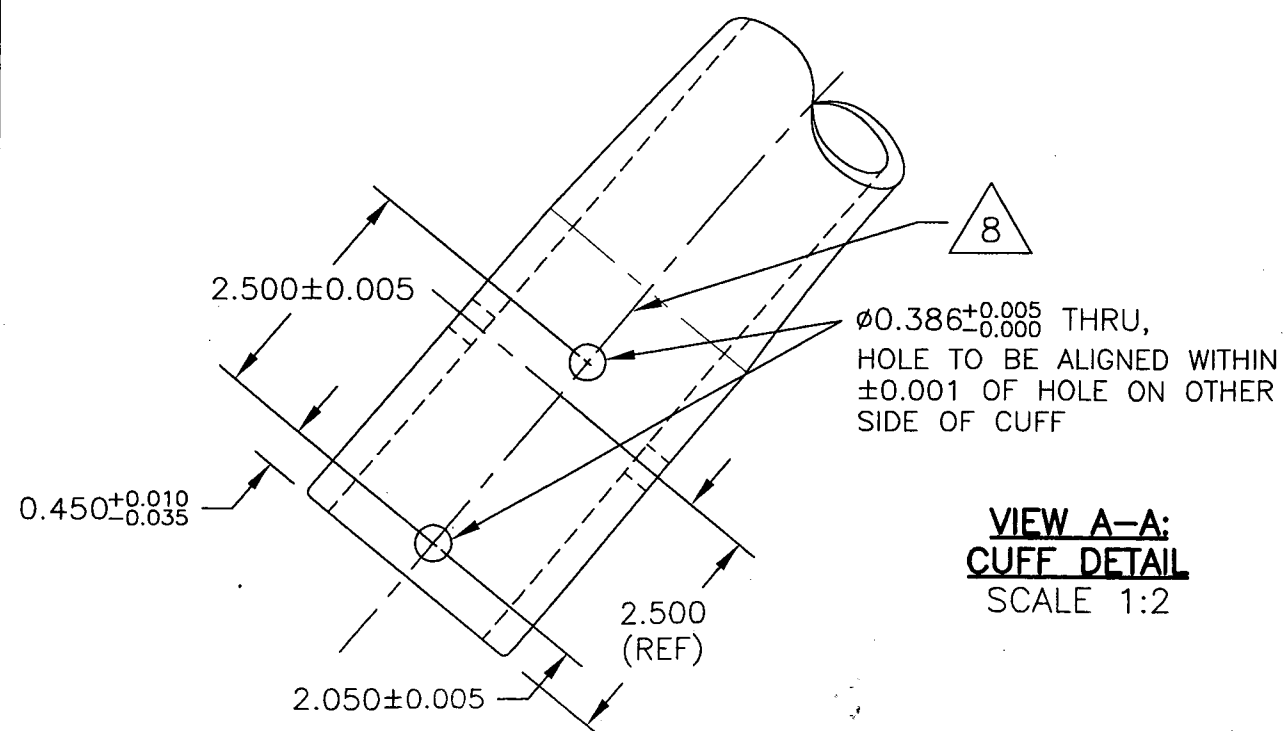
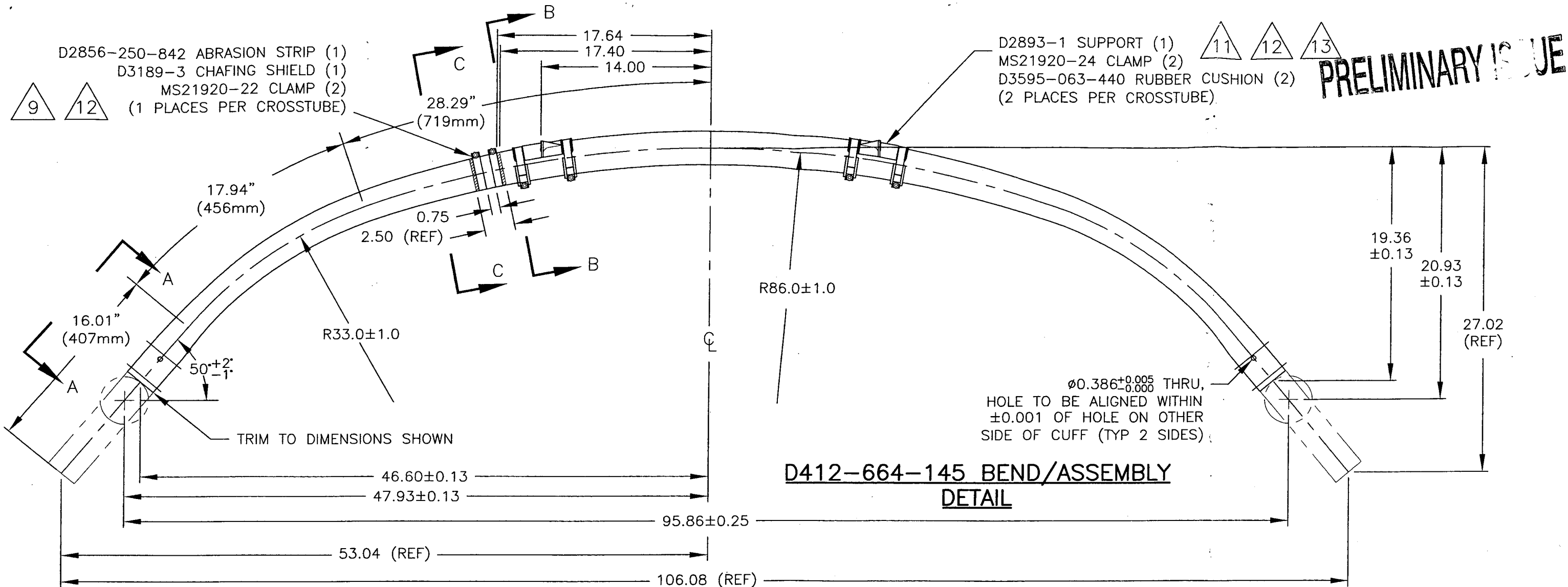
**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6019-128  
FINISHED LENGTH = 124.48±0.020 (BEFORE BENDING/TRIMMING)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR D3189-3 CHAFING SHIELD AND ASSOCIATED HARDWARE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-XXX-YYY ABRASION STRIPS WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

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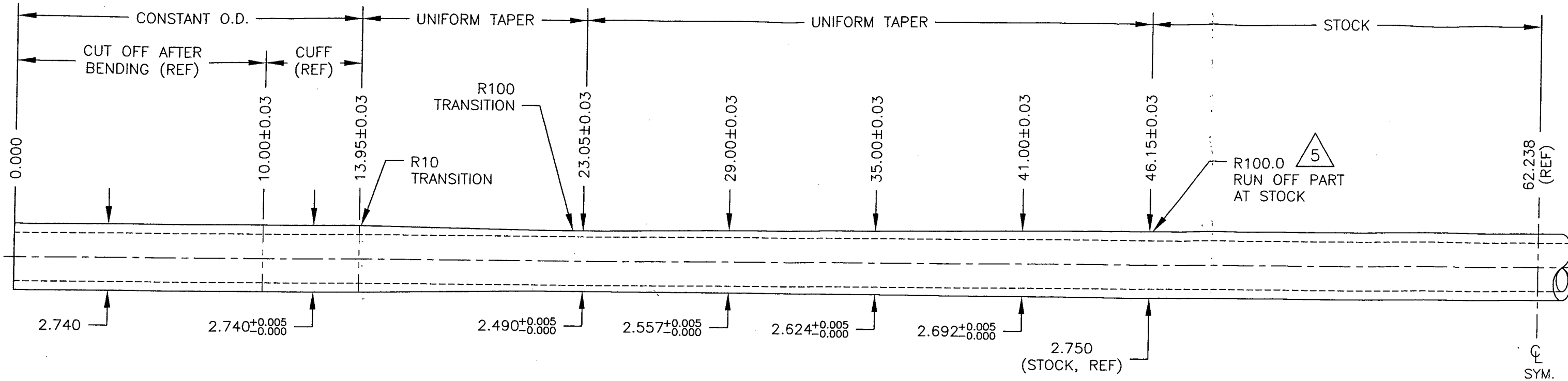


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DATE 07.03.01	TITLE CROSSTUBE (412 LOW-NARROW FWD)	SCALE 1:8	

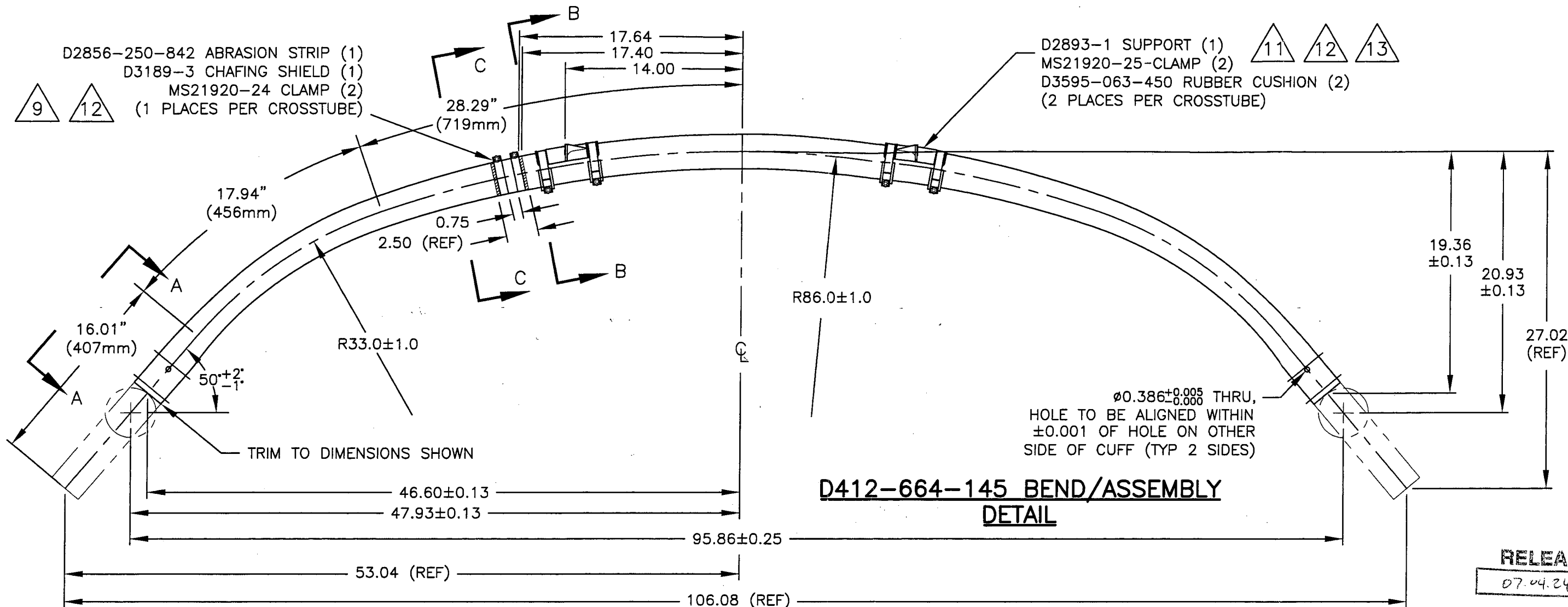


# D412-664-145 MACHINING DETAIL

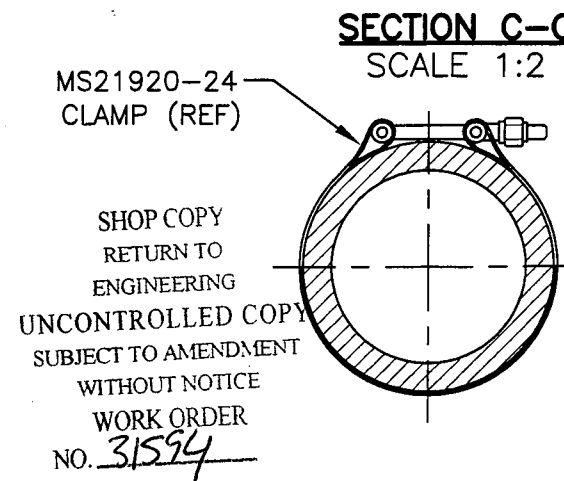
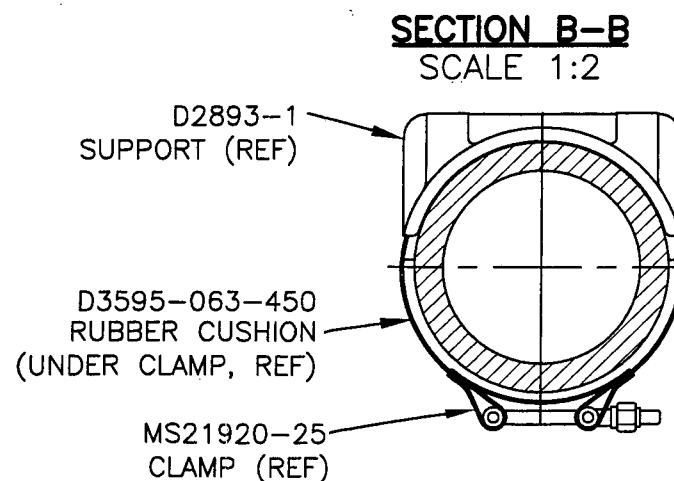
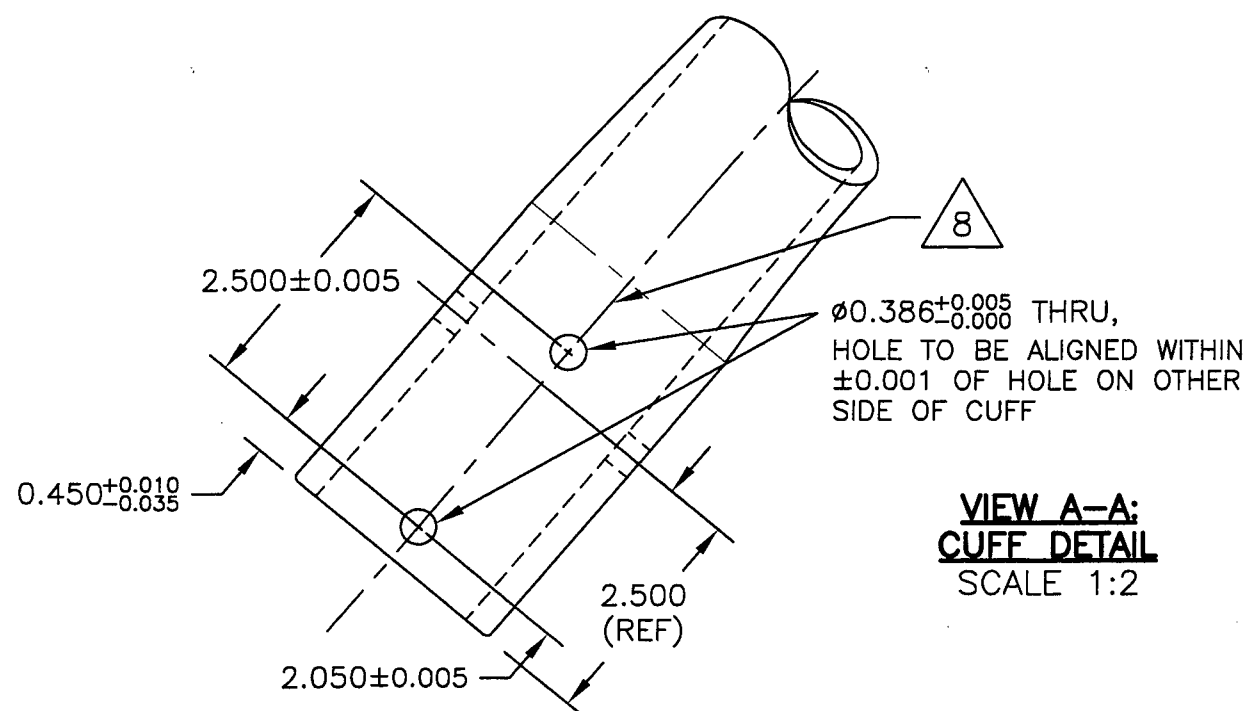
PRELIMINARY ISSUE

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DATE 07.03.01		DRAWING NO. D412-664-145		REV. B SHEET 3 OF 3
		TITLE CROSSTUBE (412 LOW-NARROW FWD)		SCALE 1:2

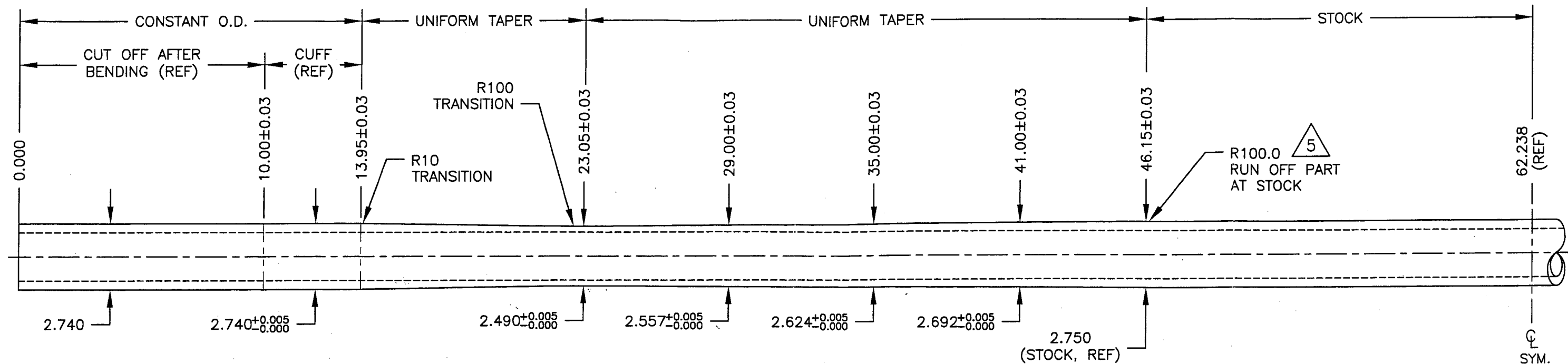


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DATE 07.03.29		TITLE CROSSTUBE (412 LOW-NARROW FWD)		SCALE 1:8	



# **D412-664-145 MACHINING DETAIL**

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07.04.19

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DATE 07.03.29		TITLE CROSSTUBE (412 LOW-NARROW FWD)			SCALE 1:4